

REMARKS

Of claims 1-41 previously presented, claims 11, 12, and 14-16 were withdrawn from consideration pursuant to an election requirement and claims 15 and 30 were previously canceled, leaving claims 1-10, 13, 17-29, and 31-41 for consideration on the merits. Applicants continue to assert that at least independent claims 1, 26, and 33 are generic. In view of the remarks presented herein, reconsideration and allowance of all pending claims are respectfully requested.

Turning to the Office action, claims 1-10, 13, and 15-39 stand rejected under 35 U.S.C. §103(a) as obvious over U.S. Patent No. 5,964,782 ("Lafontaine") in view of U.S. Patent No. 6,334,865 ("Redmond") and U.S. Patent No. 5,192,302 ("Kensey"). Applicants traverse this ground of rejection.

Independent claim 1 specifies a closure device for closing an opening in a body cavity including an elongate delivery member and a closure component removably connected to the delivery member. The closure component includes a collapsible backing movable between a non-collapsed position, in which the backing has a generally conical shape with a center portion of the backing distally spaced from a periphery of the backing, and a collapsed position, in which the backing center portion is collapsed proximally toward the backing periphery to have a generally disc shape. A collapse actuator is releasably coupled to the collapsible backing and operable to move the collapsible backing from the non-collapsed position to the collapsed position.

Similarly, independent claim 26 specifies a method of closing an opening in a body including inserting a closure component having a collapsible pile backing distally through the opening closure. The pile backing initially has a non-collapsed position in which the backing has a generally conical shape with a center portion of the backing distally spaced from a periphery of the backing. The method further includes withdrawing the closure component proximally relative to the opening such that the tissue engaging hooks engage tissue adjacent the opening. A collapse actuator that is releasably coupled to the collapsible pile backing is manipulated to collapse the collapsible pile backing to a collapsed position in which the backing center portion

is moved proximally toward the backing periphery to form a generally disc shape. The collapse actuator is then disconnected from the collapsible pile backing.

Also similar to claim 1, independent claim 33 specifies a closure device for closing an opening in a body cavity including an implantable closure component having a longitudinally collapsible backing movable between a non-collapsed position, in which the backing has a generally conical shape with a center portion of the backing distally spaced from a periphery of the backing, and a collapsed position, in which the backing center portion is collapsed proximally toward the backing periphery to have a generally disc shape. A collapse actuator is releasably coupled to the collapsible backing and operable to move the collapsible backing from the non-collapsed position to the collapsed position.

The proposed combination of Lafontaine, Redmond, and Kensey fails to disclose or suggest a closure device or method having a collapse actuator that is releasably coupled to a collapse backing, as specified in the currently pending claims. The Examiner acknowledges that the primary Lafontaine reference fails to disclose or suggest: (1) a backing having a conical shape that is collapsible into a disc shape; and (2) a collapse actuator releasably coupled to the collapsible backing. The Examiner alleges that Redmond discloses a conical backing that is collapsible to a disc shape, but does not rely on Redmond for disclosing a collapse actuator. Instead, the Examiner alleges that Kensey teaches a collapse actuator that is releasably coupled to a collapsible backing. Specifically with regard to Kensey, the Office action states:

Kensey et al. teaches manipulating a collapse actuator 52 releasably coupled to a collapsible backing 50 and...disconnecting the collapse actuator from the collapsible pile backing (Figures 1-2, col. 2, lines 20-43, col. 3, lines 38-58; col. 7, lines 14-34). (Office action dated April 17, 2004, page 4, lines 9-14)

Thus, the Examiner argues that the filament 52 is responsive to the claimed collapse actuator and concludes that the filament 52 is releasably coupled to the cord 50. These positions, however, are contrary to what is actually taught in Kensey.

Contrary to the Examiner's characterization, Kensey specifically teaches that the filament 52 remains permanently coupled to the cord 50, and therefore fails to disclose or suggest a collapse actuator that is releasably coupled to a collapse backing, or the step of disconnecting a collapse actuator from a collapse backing, as claimed. More specifically, Kensey states that the

filament is "secured to the cord 50 by wrapping it about the midsection 54 of the cord and knotting it thereat." (Kensey, Col. 7, lines 28-30). Only a distal portion 56 of the filament 52 is removed by cutting, leaving a proximal portion 58 of the filament securely fastened to the cord 50. (Kensey, Col. 7, line 67 to Col. 8, line 1). Kensey further teaches that the filament proximal portion 56 remains attached to the cord 50 both throughout and after the procedure by stating:

In accordance with the preferred embodiment of the invention, the filament 52 is also resorbable, and is preferably a suture of 3-0 size. *These features enable the cord and filament to be left in place after hemostasis has occurred*, since both will be absorbed by body's tissues thereafter. (emphasis added) (Kensey, Col. 8, lines 50-57).

Accordingly, Kensey teaches that the filament is left in place to be absorbed by the body, rather than detached from the cord and removed. In addition, each of the alternative embodiments disclosed in Kensey similarly teaches that a filament remains permanently attached to the cord. Regarding the embodiment of Figs. 9-12, Kensey states that the filament portion 116 is engaged by holding means to hold the closure device 100 in the desired position. Thus, Kensey teaches that the knot formed in the filament permanently couples the filament to the cord so that it can hold the cord in place during hemostasis, and therefore Kensey fails to disclose or suggest a collapse actuator that is releasably coupled to a collapse backing, or the step of disconnecting a collapse actuator from a collapse backing, as claimed.

The excerpts of Kensey specifically cited in the Office action do not support the Examiner's characterization of Kensey that it discloses a releasable coupling. The citation to column 2, lines 20-43 of Kensey appears misplaced as that excerpt summarizes a portion of U.S. Patent No. 4,890,612 and not the subject matter of the Kensey patent. Furthermore, at no point does Kensey allege that the '612 patent teaches or suggests a releasable coupling. Column 3, lines 38-58 of Kensey, also cited by the Examiner, does not disclose or suggest a releasable coupling, but instead simply describes how the filament is used to retract a plug. This excerpt states that the filament is "secured" to the plug, but does not affirmatively state how or whether the filament is released from the plug. Finally, the citation to column 7, lines 14-34 discloses that the filament 52 is secured to the cord 50 by forming a knot in the filament that extends around the cord. This excerpt does not state that the knot is somehow "releasable." Instead, and

as noted above, other portions of Kensey teach the contrary: that the filament remains permanently attached to the cord to hold it in place during hemostasis and is ultimately absorbed by the body.

In view of the foregoing, the proposed combination of Lafontaine, Redmond, and Kensey fails to disclose or suggest a collapse actuator releasably coupled to a collapse backing as specified in the claims, and therefore the obviousness rejection based thereon must be withdrawn.

Claims 2-10, 13, 17-25, 27-29, 31-32, and 34-41 all depend from independent claims 1, 26, and 33, and therefore are patentable over the proposed combination of references for the same reasons presented above.

Regarding the rejection asserted against claims 17-21, the Examiner appears to interpret the Redmond reference in a manner that is inconsistent with the other rejections articulated in the Office action. In rejecting independent claims 1, 26, and 33, the Examiner points to Kensey as disclosing a collapse actuator. In rejecting claims 17-21, however, the Examiner alleges that Redmond discloses structure responsive to the claimed collapse actuator by stating, "Redmond et al. teaches a deformable hook, or wire, 22 at the distal end of an [sic] collapse actuator 20..." Accordingly, the rejection articulated against claims 17-21 is inconsistent with the other rejections presented in the Office action and therefore it is unclear to Applicants exactly how the Examiner is interpreting Redmond.

Furthermore, as pointed out in Applicants' previous response, the barrier actuator 22 of Redmond is permanently coupled to the barrier 26, and therefore is not responsive to the releasable collapse actuator. More specifically, if one considers the barrier actuator 22 to be the collapse actuator and the barrier 26 to be the collapse backing, then it is evident that the barrier actuator 22 is not releasably coupled to the barrier 26 as required in the claims. Accordingly, the barrier actuator 22 of Redmond is not responsive to the claimed collapse actuator.

As a final point of note, Applicants submit that the April 17, 2007 Office action is properly identified in the "Office Action Summary" as a non-final action. Inconsistent with the Summary page, the last paragraph of page 8 of the body of the action asserts that it is final. This is incorrect, as the present action is the first communication on the merits since the RCE filed on

April 9, 2007. Accordingly, applicants wish to clarify for the record that the most recent action is, in fact, non-final.

CONCLUSION

It is submitted that the present application is in good and proper form for allowance. A favorable action on the part of the Examiner is respectfully solicited.

If, in the opinion of the Examiner a telephone conference would expedite prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,
MILLER, MATTHIAS & HULL

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By:



Brent E. Matthias, Reg. No. 41,974
Attorneys for Applicants
One North Franklin Street
Suite 2350
Chicago, Illinois 60606
(312) 977-9902